

AMENDMENTS TO THE CLAIMS

1. (currently amended) A polyethylene moulding composition with multimodal molecular mass distribution, which has a density in the range of from 0.950 to 0.958 g/cm<sup>3</sup> at 23 °C ~~and~~, an MFR<sub>190/5</sub> in the range of from 0.30 to 0.50 dg/min, and which comprises from 40 to 50 % by weight of a low-molecular-mass ethylene homopolymer A[[,]]; from 25 to 35 % by weight of a high-molecular-mass copolymer B made from ethylene and ~~from another~~ first 1-olefin comonomer having from 4 to 8 carbon atoms[[,]]; and from 24 to 28 % by weight of an ultrahigh-molecular-mass ethylene copolymer C containing a second 1-olefin comonomer, wherein all of the percentage data are based on the total weight of the moulding composition.
2. (currently amended) ~~A~~The polyethylene composition as claimed in claim 1, wherein the first 1-olefin comonomer is present in an amount~~high-molecular-mass copolymer B contains small proportions of~~ from 0.2 to 0.5 % by weight ~~of co-monomer having from 4 to 8 carbon atoms, based on the weight of copolymer B, and wherein the ultrahigh-molecular-mass ethylene copolymer C contains an amount in the range~~the second 1-olefin comonomer is present in an amount from 1 to 2 % by weight ~~of comonomers, based on the weight of copolymer C.~~
3. (currently amended) ~~A~~The polyethylene composition as claimed in claim 1 ~~or 2, which, as co-monomer, contains~~ wherein the first 1-olefin and second 1-olefin comonomers are independently selected from 1-butene, 1-pentene, 1-hexene, 1-octene, 4-methyl-1-pentene, or a mixture of these.
4. (currently amended) ~~A~~The polyethylene composition as claimed in ~~one or more of claims 1 to 3~~claim 1, which has a viscosity number VN<sub>tot</sub> of from 330 to 380 cm<sup>3</sup>/g, ~~preferably from 340 to 370 cm<sup>3</sup>/g, measured to ISO/R 1191 in decalin at 135 °C.~~
5. (currently amended) ~~A~~The polyethylene composition as claimed in ~~one or more of claims 1 to 4~~claim 1, which has a swell ratio in the range of from 130 to 145 %, ~~and a notched~~

impact strength (ISO) in the range of from 14 to 17 kJ/m<sup>2</sup>, and a stress-crack resistance (FNCT) in the range of from 150 to 220 h.

6. (currently amended) A process for producing a polyethylene composition with multimodal molecular mass distribution, which has a density in the range of from 0.950 to 0.958 g/cm<sup>3</sup> at 23 °C, an MFR<sub>190/5</sub> in the range of from 0.30 to 0.50 dg/min, and which comprises from 40 to 50 % by weight of a low-molecular-mass ethylene homopolymer A; from 25 to 35 % by weight of a high-molecular-mass copolymer B made from ethylene and a first 1-olefin comonomer having from 4 to 8 carbon atoms; and from 24 to 28 % by weight of an ultrahigh-molecular-mass ethylene copolymer C containing a second 1-olefin comonomer, wherein all of the percentage data are based on the total weight of the moulding composition, as claimed in one or more of claims 1 to 5, in which wherein the monomers are polymerized in suspension at a temperature in the range of from 20 to 120 °C, at a pressure in the range of from 0.15 to 1 MPa, and in the presence of a high-mileage Ziegler catalyst composed of a transition metal compound and of an organoaluminum compound, ~~which comprises~~ the process comprising conducting polymerization in three stages, where the molecular mass of the polyethylene prepared in each stage is regulated with the aid of hydrogen, thereby forming a hydrogen concentration in each stage.
7. (currently amended) A ~~The~~ process as claimed in claim 6, wherein the hydrogen concentration in the first polymerization stage is adjusted so that ~~the~~ a viscosity number VN<sub>1</sub> of the low-molecular-mass ~~polyethylene~~ ethylene homopolymer A is in the range from 60 to 80 cm<sup>3</sup>/g.
8. (currently amended) A ~~The~~ process as claimed in claim 6 ~~or 7~~, wherein the hydrogen concentration in the second polymerization stage is adjusted so that ~~the~~ a viscosity number VN<sub>2</sub> of ~~the~~ a mixture of polymer A and polymer B is in the range from 160 to 200 cm<sup>3</sup>/g.
9. (currently amended) A ~~The~~ process as claimed in ~~any of claims 6 to 8~~ claim 6, wherein the hydrogen concentration in the third polymerization stage is adjusted so that ~~the~~ a viscosity

number  $VN_3$  of the mixture of polymer A, polymer B, and polymer C is in the range of from 330 to 380  $\text{cm}^3/\text{g}$ , in particular of from 340 to 370  $\text{cm}^3/\text{g}$ .

10. (currently amended) The use of a process for producing a canister having a capacity in a range from 2 to 20  $\text{dm}^3$  (l) from of a polyethylene composition with multimodal molecular mass distribution, which has a density in the range of from 0.950 to 0.958  $\text{g}/\text{cm}^3$  at 23 °C, an  $\text{MFR}_{190/5}$  in the range of from 0.30 to 0.50  $\text{dg}/\text{min}$ , and which comprises from 40 to 50 % by weight of a low-molecular-mass ethylene homopolymer A; from 25 to 35 % by weight of a high-molecular-mass copolymer B made from ethylene and a first 1-olefin comonomer having from 4 to 8 carbon atoms; and from 24 to 28 % by weight of an ultrahigh-molecular-mass ethylene copolymer C containing a second 1-olefin comonomer, wherein all of the percentage data are based on the total weight of the moulding composition as claimed in one or more of claims 1 to 5 for producing canisters with a capacity in the range from 2 to 20  $\text{dm}^3$  (l), where the polyethylene composition is first plasticized, the process comprising:
  - (a) plasticizing the polyethylene composition in an extruder in the range from 200 to 250 °C; and is then extruded
  - (b) extruding the product of step (a) through a die into a mould; where it is first blown up and then cooled and solidified
  - (c) blowing up the product of step (b) in a blow molding apparatus, thereby forming the canister; and
  - (d) solidifying the canister by cooling.
11. (new) The polyethylene composition as claimed in claim 4 wherein the viscosity number  $VN_{\text{tot}}$  is from 340 to 370  $\text{cm}^3/\text{g}$
12. (new) The process as claimed in claim 9, wherein the viscosity number  $VN_3$  of the mixture of polymer A, polymer B, and polymer C is in the range of from 340 to 370  $\text{cm}^3/\text{g}$ .